

Matrix of Intended Learning Outcomes (ILO) and Courses

Bachelor Program of Forestry

No.	Code Course	Course Name	Intended Learning Outcomes (ILO)								
			ILO1	ILO2	ILO3	ILO4	ILO5	ILO6	ILO7	ILO8	ILO9
1	MU0000603W001	Religion	2				3				2
2	MU0000602W002	Pancasila Education	2				3				2
3	190401602W010	Basic Management	2	1			2		3	1	1
4	MU0000602W004	Indonesian Education	1	2			3				2
5	MU0000602W006	Basic of Social and Culture	1		2	2	3				
6	190401602W001	English	1	2			3				2
7	190401602W002	Biology		3	2	2		2		1	
8	190401602W004	Chemistry		3	2			2		1	
9	190401602W005	Mathematics		2		3		2	1		
10	190401602W027	Introduction of Forestry Science	1	3	2	2		3			
11	190401602W003	Physics		3				2		2	
12	190401602W006	Statistics	2	3	3	3				3	
13	190401603W007	Agroclimatology	2	3		3					
14	190401603W011	Dendrology		3	2	2	2	2		2	
15	190401602W013	Forest Resources Economics	2	3	1						1
16	190401602W015	Forest Disease Science	2	3		1		2			
17	190401603W019	Wood Measurement	2	3		2		2			
18	190401603W008	Anatomy of Wooden Plant	2	3	2			3			
19	MU0000602W003	Civics Education	2				3				2
20	190401601W031	Forestry Introduction Practice	2		3		3				

21	190401603W012	Forest Ecology		2	2	2	2	2	2	2	
22	190401603W016	Forest Protection		3	2					3	
23	190401603W018	General Soil Science	2	3			2			3	
24	190401603W021	Forest and Land Inventory		3	3		3		2	2	3
25	190401602W022	Forestry Policy and Regulation	2	2		3		2			
26	190401602W032	Wood Properties	2	3	3						
27	190401602W028	Forest Products Chemistry Processing	2		2	3		3			
28	190401603W020	Wood Processing Industry	2	3		2		2			
29	190401603W033	Silvics	2	3		2			2		
30	190401603W026	Forest Harvesting	2	2						3	
31	190401602W029	Social Forestry	2			2					3
32	190401603W009	Biology and Wood Deterioration	2	3					2	2	
33	190401603W024	Soil and Water Conservation	2	3				2		3	
34	190401602W023	Forestry Entrepreneurship	3	2				2		1	
35	190401602W017	Soil Science and Forest Nutrition	2	3		2			3		3
36	190401603W034	Silviculture	2	3		2		2	2	2	2
37	190401602W030	Nature Protection and Preservation		3	3	1					
38	190401603W014	Utilization of Non-wood Forest Products	2	3			1			2	
39	190401604W127	Community Service Program	3				3	3			
40	190401603W123	Field Work Practice	3				3	3			
41	190401601W124	Proposal Seminar	3			3			3	3	
42	190401601W125	Result Seminar	3			3			3	3	

43		Bachelor Thesis Exam	3			3				3	
FOREST MANAGEMENT											
44	190401602P037	Economic Analysis of Forestry Business	2	3	2			2			2
45	190401602P096	Forest Management Planning	3	2		3	3		3		2
46	190401603P056	Ergonomics	2	2		2				2	
47	190401602P042	Forest Biometrics		1				3		3	2
48	190401603P063	Land Surveying and Mapping Science	2	3				2			2
49	190401603W025	Scientific Method and Experimental Design	2		3	3				3	
50	190401602P038	Growth and Yield Analysis	2	3	2			2			2
51	190401603P107	Geographic Information System	2	3				3		3	2
52	190401602P076	Conflict Management	2			3				3	
53	190401602P054	Environmental Economics	2	3	2	1				1	
54	190401602P074	Forest Management	2	2	2	1					
FOREST PRODUCTS TECHNOLOGY											
55	190401602P084	Wood Preservation	2		2	3		2			
56	190401602P041	Bio Composites	2		2	3		2			
57	190401602P117	Chemical Technology of Fiber and Biopolymer	2	3	2	2					
58	190401602P058	Physical and Mechanical Properties of Wood			3	2	1				
59	190401602P060	Wood Identification and Utilization	2	2	3						
60		Forest Products Technology Practice 1	2				2			3	

61		Forest Products Technology Practice 2	2			2	2			3	
62		Wood Drying	2	2			2		3		
63	190401602P075	Forest Industry Management	2	3	2						
64	190401602P113	Extractive Products Application Technology	2	2		3					
65	190401602P040	Bioenergy and Biomass Conversion	2	2		3					
66	190401602P095	Wood Adhesive		2		3					1
67		Forest Products Technology Practice 3	2				2			3	
68		Forest Products Technology Practice 4	2				2			3	
SILVICULTURE											
69	190401603P082	Tree Improvement	2	2				3			3
70	190401603P111	Land Surveying and Evaluation	2	3			3				3
71	190401603P105	Silviculture of Nature Forest	2		2		3		2		
72	190401603P062	Forest Entomology	2	3			2	2			
73	190401603P078	Forest Microbiology	2	3				3	2		
74	190401603P106	Silviculture of Plantation Forest	2		2		3		2		
75	190401602P086	Management of Forest Soil Fertility	2		3	3			3		
FOREST RESOURCE CONSERVATION AND ECOTOURISM											
76	190401603P085	Watershed Management	2	3				3			
77	190401603P079	Forest Microclimatology	2	3		3					
78	190401603P053	Wildlife Ecology	2	3				3		2	
79	190401603P067	Nature Tourism	2		2			3	2		

80	190401603P065	Biodiversity	2	3	2			3		2	
81	190401602P059	Forest Hydrology	2	3				3			
82	190401603P039	Analysis of Forest Vegetation	2	2	2	3	2		2	2	
ELECTIVE COURSE											
83	190401602P083	Introduction to Operations Research and Decision Analysis		3				2		3	
84	190401602P055	Microeconomics		2		1			3	1	
85	190401602P122	Forestry Business of Coastal Area	2	2			3		2		
86	190401603P110	Applied Statistics		2				3		3	
87	190401602P077	Forestry Machining		3		3					3
88	190401603P102	Land Reclamation			3	3				3	
89	190401603P087	Management of Climate Change	2			3			2		
90	190401603P089	Forest Fire Control		2					2	3	
91	190401603P047	Forest Ecophysiology		3	3				2		
92	190401603P048	Eco forestry	2	2	2				2		
93	190401603P115	Seed Technology		2		1		2		3	
94	190401603P104	Silviculture of Wood Forest Products									
95	190401602P118	Soil and Water Conservation Technology		2				3			3
96	190401603P064	Environmental Interpretation and Conservation Education		2	2	3					
97	190401603P052	Aquatic Ecology		2	2			3	2		
98	190401602P061	Climate and Environment			3	3			2		
99	190401602P051	Ecology of Mangrove and Coastal Ecosystems		3	3	2		2	3		

100	190401601P066	Conservation Policy		2	3	3		2	3		
101	190401602P070	Conservation of Useful Wild Plants		2	2	2		3			
102	190401602P050	Dipterocarpaceae Ecology		3	1	2	2	2	2	2	2
103	190401603P045	Dendrochronology and Wood Fossil		2	3			3			
104	190401603P091	Pollution Controlling			3		2	2			
105	190401603P046	Wood Designing and Working				3		3	2		
106	190401602P094	Wooden Materials Testing		2				3			3
107	190401603P080	Wood Molding and Panels		2				3		3	
108	190401603P119	Medicinal and Aromatic Plant Processing Technology				2		3		2	
109	190401603P091	Rural Forest Sociology	2	2		2			3	2	2
110	190401603P093	Remote Sensing		3				3			2
111	190401602P068	Forest Engineering		2				3	2	2	
112	190401602P112	Management of Forest Products		2	2	3					
113	190401603P116	Forestry Information Technology		2		2		2		2	
114	190401603P103	Silviculture of Non-wood Forest Products			3	2			2	2	1
115	190401603P035	Agroforestry	2	2	2			3	1	2	
116	190401603P073	Breeding Management and Techniques		2	2	3	2	2	2	2	
117	190401603P043	Forest Plant Biotechnology				1		2			3
118	190401603P044	Honeybee Cultivation				3		2	2		
119	190401603P114	Biochar Technique		3				3	2	2	

120	190401602P108	Forestry Certification System	2	3		2				2	
121	190401601P088	Basic of Species Introduction		2	2	2		2	2	2	
122	190401603P097	Wildlife Behavior		3	1	2		3			
123	190401602P071	Medicinal Plant Conservation		2		3			2		
124	190401602P036	Environmental Impact Analysis	2		3	2					
125	190401602P081	Environmental Modeling	2	2	3						
126	190401603P049	Avifauna Ecology		2	3	3		3	2	2	
127	190401602P069	Protected Flora Fauna Conservation		3	3	2		2	1		2
128	190401602P057	Ethnobotany		2	3	3		3		2	2
129	190401603P072	Wood Construction		2	3	2		2			
130	190401602P090	Forest Product Quality Control		2		3			2		
131	190401603P121	Pulp and Paper Technology		2	2	3	2				
132	190401603P120	Pyrolysis Technology		2	3		2				